

AMENDMENTS TO THE CLAIMS

Please cancel Claims 7-20, 22, 25-31, 33, and 36-54.

Please amend Claims 1, 6, 21, 23, 24, 32, 34, 35, and 58 as follows, and please add new Claims 55-61.

1. (Currently Amended) A fiber plate formed by arranging in a mutually adjacent manner a plurality of individual fiber plates of a same thickness so as to provide a light guiding plane larger in area than the light guiding plane of each of said individual ~~one~~ fiber plates, wherein:

each of said individual fiber plates is composed of a group of optical fibers having mutually parallel axes; ~~and~~

lateral faces of said adjacent plurality of individual fiber plates are mutually ~~so bonded at a bonding portion so~~ that the axes of the optical fibers thereof become mutually parallel; and.

said bonding portion is a radiation intercepting bonding portion.

2. (Currently Amended) A fiber plate according to claim 1, wherein the ~~axis~~ axes of said optical ~~fiber is~~ fibers are parallel or inclined to ~~the normal~~ a line normal to said light guiding plane.

3. (Original) A fiber plate according to claim 1, wherein at least either of said light guiding plane and said lateral face is a polished surface.

4. (Original) A fiber plate according to claim 1, wherein said lateral faces are mutually bonded by at least either of an adhesive material or a metal.

5. (Cancelled)

6. (Currently Amended) A fiber plate ~~according to claim 1~~, wherein formed by arranging in a mutually adjacent manner a plurality of individual fiber plates of a same thickness so as to provide a light guiding plane larger in area than the light guiding plane of each of said individual fiber plates, wherein:

each of said individual fiber plates is composed of a group of optical fibers having mutually parallel axes;

lateral faces of said adjacent plurality of individual fiber plates are mutually bonded through an adhesive layer so that the axes of the optical fibers thereof become mutually parallel; and

each said lateral face includes a face crossing ~~the normal~~ a line normal to said light guiding plane.

7 - 20. (Cancelled)

21. (Currently Amended) An apparatus ~~according to claim 14~~, wherein: A radiation image pickup apparatus provided with a wavelength converting member for converting radiation into light, a photoelectric converting element for converting the light into an electrical signal, and a fiber plate provided between said wavelength converting member and said photoelectric converting element: wherein

said fiber plate is formed by arranging in a mutually adjacent manner plural individual fiber plates of a same thickness so as to provide a light guiding plane larger in area than the light guiding plane of each of said individual fiber plates;

each of said plural individual fiber plates is composed of a group of optical fibers having mutually parallel axes, and lateral faces of said plural individual fiber

plates are mutually bonded so that the axes of the optical fibers thereof become mutually parallel;

said photoelectric converting element includes plural pixels of mutually different light receiving areas; and

the width of the gap between mutually adjacent said individual fiber plates is smaller than the width of a pixel having a smallest light receiving area in said photoelectric converting element.

22. (Cancelled)

23. (Currently Amended) ~~An apparatus according to claim 14, wherein~~
A radiation image pickup apparatus provided with a wavelength converting member for converting radiation into light, a photoelectric converting element for converting the light into an electrical signal, and a fiber plate provided between said wavelength converting member and said photoelectric converting element: wherein

said fiber plate is formed by arranging in a mutually adjacent manner plural individual fiber plates of a same thickness so as to provide a light guiding plane larger in area than the light guiding plane of each of said individual fiber plates;

each of said plural individual fiber plates is composed of a group of optical fibers having mutually parallel axes, and lateral faces of said plural individual fiber plates are mutually bonded so that the axes of the optical fibers thereof become mutually parallel; and

the gap between mutually adjacent said individual fiber plates is positioned on an effective pixel area of a chip constituting said photoelectric converting element.

24. (Currently Amended) ~~An apparatus according to claim 14, wherein~~
A radiation image pickup apparatus provided with a wavelength converting member for
converting radiation into light, a photoelectric converting element for converting the light
into an electrical signal, and a fiber plate provided between said wavelength converting
member and said photoelectric converting element: wherein

said fiber plate is formed by arranging in a mutually adjacent manner
plural individual fiber plates of a same thickness so as to provide a light guiding plane
larger in area than the light guiding plane of each of said individual fiber plates;

each of said plural individual fiber plates is composed of a group of
optical fibers having mutually parallel axes, and lateral faces of said plural individual fiber
plates are mutually bonded so that the axes of the optical fibers thereof become mutually
parallel; and

a joint line formed by the gap between mutually adjacent said
individual fiber plates and a joint line formed by the gap between chips constituting said
photoelectric converting element mutually cross with an angle larger than 0 and smaller
than 90 .

25-31. (Cancelled)

32. (Currently Amended) ~~An apparatus according to claim 25, wherein:~~
A radiation image pickup apparatus provided with a wavelength converting member for
converting radiation into light, a photoelectric converting element for converting the light
into an electrical signal, and a fiber plate provided between said wavelength converting
member and said photoelectric converting element:

wherein said fiber plate is formed by arranging in a mutually
adjacent manner plural individual fiber plates of a same thickness so as to provide a light
guiding plane larger in area than a light guiding plane of each said individual fiber plate;

each of said plural individual fiber plates is composed of a group of optical fibers having axes parallel to the normal line to said light guiding plane;

lateral faces of said plural individual fiber plates are mutually so bonded that the axes of the optical fibers thereof become mutually parallel;

the front and rear surfaces of said fiber plate, constituting light guiding planes thereof, have a same area;

said photoelectric converting element includes plural pixels of mutually different light receiving areas; and

the width of the gap between mutually adjacent said individual fiber plates is smaller than the width of a pixel having a smallest light receiving area in said photoelectric converting element.

33. (Cancelled)

34. (Currently Amended) ~~An apparatus according to claim 25, wherein~~
A radiation image pickup apparatus provided with a wavelength converting member for converting radiation into light, a photoelectric converting element for converting the light into an electrical signal, and a fiber plate provided between said wavelength converting member and said photoelectric converting element:

wherein said fiber plate is formed by arranging in a mutually adjacent manner plural individual fiber plates of a same thickness so as to provide a light guiding plane larger in area than a light guiding plane of each said individual fiber plate;

each of said plural individual fiber plates is composed of a group of optical fibers having axes parallel to the normal line to said light guiding plane;

lateral faces of said plural individual fiber plates are mutually so bonded that the axes of the optical fibers thereof become mutually parallel;

the front and rear surfaces of said fiber plate, constituting light guiding planes thereof, have a same area; and

the gap between mutually adjacent said individual fiber plates is positioned on an effective pixel area of a chip constituting said photoelectric converting element.

35. (Currently Amended) ~~An apparatus according to claim 25, wherein:~~
A radiation image pickup apparatus provided with a wavelength converting member for converting radiation into light, a photoelectric converting element for converting the light into an electrical signal, and a fiber plate provided between said wavelength converting member and said photoelectric converting element:

wherein said fiber plate is formed by arranging in a mutually adjacent manner plural individual fiber plates of a same thickness so as to provide a light guiding plane larger in area than a light guiding plane of each said individual fiber plate;

each of said plural individual fiber plates is composed of a group of optical fibers having axes parallel to the normal line to said light guiding plane;

lateral faces of said plural individual fiber plates are mutually so bonded that the axes of the optical fibers thereof become mutually parallel;

the front and rear surfaces of said fiber plate, constituting light guiding planes thereof, have a same area; and

a joint line formed by the gap between mutually adjacent said individual fiber plates and a joint line formed by the gap between chips constituting said photoelectric converting element mutually cross with an angle larger than 0 and smaller than 90 .

36-54. (Cancelled).

55. (New) A fiber plate according to claim 1, wherein said radiation intercepting member includes at least one metal selected from Fe, Co, Ni, Cu, Zn, Ag, Sn, Gd, W, Pt, Au, Pb and Bi.

56. (New) A fiber plate according to claim 6, wherein said adhesive layer includes a radiation intercepting member.

57. (New) A fiber plate according to claim 56, wherein said radiation intercepting member includes at least one metal selected from Fe, Co, Ni, Cu, Zn, Ag, Sn, Gd, W, Pt, Au, Pb and Bi.

58. (New) A fiber plate formed by arranging in mutually adjacent manner a plurality of individual fiber plates of a same thickness so as to provide a light guiding plane larger in area than the light guiding plane of said individual one fiber plate, wherein:

each of said individual fiber plates is composed of a group of optical fibers having mutually parallel axes; and

lateral faces of said plurality of individual fiber plates are mutually so bonded that the axes of the optical fibers thereof become mutually parallel, and said lateral face bonded to an adjacent fiber plate is a polished surface.

59. (New) A radiation image pickup apparatus comprising a fiber plate according to claim 1.

60. (New) A radiation image pickup apparatus comprising a fiber plate according to claim 6.

61. (New) A radiation image pickup apparatus comprising a fiber plate according to claim 58.